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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,416	12/31/2003	Kendall S. Wills	TI-37082 (032350.B577)	9565
23494	7590	07/10/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			BUI, BRYAN	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	
			2863	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,416

Applicant(s)

WILLS ET AL.

Examiner

Bryan Bui

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant' paper filed on 6/22/2006 has been received and entered. Claims 1, 6, 11, 15 16 have been amended. Claims 17-21 have been added.
2. Applicants' remark has been considered.
3. A declaration Under Rule 131, "Wills Declaration", exhibit A, and declaration of Susie Collins have been received and entered. However, in page 9, last paragraph and page 10, first par that applicants indicated the exhibit A teach the concept of accessing of the library of one or more reference wavelet analysis result(s) to compare the result thereto, and indicating the concept of a library of one or more reference wavelet analysis results that each correspond to one or more anomalies having one or more known characteristics (in Exhibit A, pages 14-15, 40-45, and 61-65). However, after reviewed, we did not see any accessing library applied in comparing the wavelet power spectrum with one or more reference wavelet power spectra, and do not indicating the one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet power spectra such claimed in the current application. Contrary, pages 14-15, 40-45, and 61-65 in exhibit A just introduce of using wavelet analysis with wavelet transform, particularly Haar wavelet, DauB wavelet are using to tested, and calculates the wavelet coefficient, and applied filtering for sub-band coding in which the signal pass through. The technique is simple and showing in the theory/definition of the wavelet transforms/wavelet analysis. The technique could use multiple TDR waveforms features and compares to waveform of unknown circuit features similarities and differences provide information about the

unknown waveforms associated circuitry. It is not disclose the limitations recited in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Bechhoefer et al (US 20040230383). Hereinafter Bechhoefer.

With respect to claim 1, 6, 11, 15,16, and 17-21, Bechhoefer teaches a system for wavelet analysis of one or more time domain reflectometry (TDR) signals to determine one or more characteristics of one or more anomalies in a wire (paragraph 0081), the system comprising: a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics (figure, item 112; paragraphs 0013, 0086); and an analysis module (figure 2, item 108 operable to: receive a TDR signal that has reflected back up a wire from an anomaly in the wire and calculate a wavelet analysis result from a wavelet analysis of the TDR signal (paragraph 0081); access the library and compare the wavelet analysis result with one or more reference wavelet analysis results (figure 2, paragraphs 0013, figure 22B); if the wavelet analysis result corresponds to one or more particular reference

wavelet analysis results, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results (paragraph 0089) ; and if the wavelet analysis result of the TDR signal does not correspond to one or more reference wavelet analysis results, indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library (paragraph 0091).

With respect to claims 2-4, 7-9, 12-13, wherein the wavelet analysis result comprises a wavelet power spectrum of the TDR signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra (paragraphs 0081, 0342, figure 28); wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal (paragraphs 0023, 0342); wherein a location of the anomaly is determined according to the TDR signal (0081, 0094);

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 10, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bechhoefer et al (US 20040230383). Hereinafter Bechhoefer.

Bechhoefer does not disclose an integrated circuit package comprises the wire. However, Bechhoefer teach a technique to determine the defects/events of the wire under test includes a pin connection couples to one or more pins of a wire that may be part of a wireharness (paragraph 0077). It would have been obvious to one of ordinary skill in the art to realize that to test a wire that is included in an integrated circuit package with respect to claimed apparatus is intended to be used does not differentiates the claimed apparatus from the conventional apparatus to satisfying the claimed limitations. *Ex parte Masham*, 2 USPQ2d-1647 (1987).

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claim 1-21 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 6-10, 12, 19-23 of copending Application No. 10/749885. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed invention of the current application indicates the specific detail (For example: time domain

Art Unit: 2863

reflectometry signals instead of signals as discloses in the copending application; Claims 1-4, 5-9, 10-13, 14-16, 17-21 of the current application are equivalent with claims 1-3, 6-9, 12, 19-23 of the copending application. (the limitations of claims 4, 9, 13 of the current application anticipated in the copending application of independent claims).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 571-272-2271. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BB

7/5/2006

BRYAN BUI
PRIMARY EXAMINER

